graves were like those in the ancient graveyard nearby, they did not point towards Mecca as do Moslem graves, and so it would seem that the mosque was built on top of part of the ancient burial ground. The pillars and columns of the mosque were connected by keel-pointed arches and the ceiling was supported by two teak pillars 13 feet in height on the top of which rested a beam. The pillars and beam have been removed from the mosque and are in the possession of the Bahrain Government. It would seem that owing to the comparative weakness, of the pillars the roof can only have been made of some light material probably brushwood or palm-branches covered with earth. 172 778 346

Diez states that when he visited the mosque, early in the century, there was a long inscription in the Qibla wall of the courtyard which showed that the mosque in its latest form was built in the year 740 A.H. (1339/40 A.D.). This tablet, together with some inscribed blocks which used to be above the Qibla wall, have fallen from their place and while some pieces of them are still in the possession of the Bahrain Government many have disappeared. These inscriptions and the square inscribed stone over the door of the western minaret are all of the same period, but it seems probable that the shorter inscription near the door of the minaret dates from the eleventh century A.D. At the feet of the pillars of the west wall of the courtyard are the remains of two Qibla stones. These have also fallen into disrepair since the visit of Diez, the top half of each stone has disappeared and the writer has been unable to trace them. The presence of these Qibla stones is unusual, only in the mosques of Ibn Tulun in Cairo and of the Prophet at Medina are they present. Qibla stones were used before the introduction of the mihrab niche to indicate the direction of prayer. 172 778 346 212

The two Qibla stones bear inscriptions that show them to be of Shiite origin and so the mosque in its present form is a Shiite one. The inscription on a wooden pillar which once supported the roof and which has also disappeared, was of the same period and bore a similar inscription. The wooden pillars formerly in the mosque led Diez to ascribe the original mosque to the tenth or eleventh centuries A.D. It is interesting to note that wooden pillars of the same style and with the same ornamentation were found in the mosque at Samarra, in Iraq, which was founded by the Caliph al-Mu'tasim in 836 A.D. The mosque also had a school and a well attached to it, the traces of the latter can still be seen near the graves to the east of the mosque itself.

In the corner of Bilad al-Qadim nearest to the Suq al-Khamis mosque is another ancient inscription, in the mosque known as Masjid ar-Raf'ia. This is also a Qibla stone, set into the west wall of the mosque, but although it is in Kufic characters the work does not seem as fine as in the Kufic inscriptions in the Suq al-Khamis Mosque, possibly because this mosque was of less importance than the one at the Suq. The inscription bears the names of Muhammad, Ali, Fatima, Hussein and Hassan and is therefore also of Shiite origin. Bilad al-Qadim itself presents a sorry spectacle and with the exception of the

south-west corner the town is deserted and in ruins. Also on this plain is the Abu Zaidan Mosque, built over a spring of the same name. This mosque has recently been repaired by the Government and is much used by the Shia people of Manama, especially by the women during weddings.

To the north of the Budaiya Road is the ruined mosque of Abu Mahara, a strange little building with two storeys and a tall column in the centre of the spring. This mosque was built in the year 889 A.H. (1484 A.D.) as shown by an inscription to this effect in its west wall.

There are many other mosques in Bahrain, some of which contain inscriptions giving the date of their foundation, but they are of comparatively recent date and the mosques themselves are of no architectural interest.

THE FORTS OF BAHRAIN

Portuguese and Persians, Arabs and Omanis, all these have at one time or another attacked and occupied Bahrain and have retained control of the islands by the construction and garrisoning of forts and castles. The oldest surviving fort in Bahrain is the Qalat al-Ajaj, built by the Portuguese some time after their occupation of Bahrain in 1521. This fort lies on the northern shore of Bahrain Island some three miles from Manama and the easiest way to visit it is by driving along the Manama-Budaiya Road and then by turning off to the north when the ruins of the fort can be seen through the date palms.

On the sea shore below the fort can be seen the steps by which the Portuguese entered their boats, but with the exception of these remains there are no relics of the Portuguese in Bahrain. A number of cannon have been found, but there is a surprising absence of inscriptions, coins or gravestones.

The exact date of the construction of the fort is not known, but the fort was repaired in 1562 and 1586, this need for continual repair was no doubt due to the many revolts which took place in Bahrain against the Portuguese. Shaikh Khalifah an-Nabhani, in his history of Bahrain, mentions that he visited the fort and saw this latter date inscribed in four places on the walls of the fort, but today there is no sign of these inscriptions.

Page 62 shows a map of north Bahrain Island and Muharraq taken from a Portuguese book of the seventeenth century. It is interesting to see that whereas the Portuguese fort, in fact, has five sides, with square towers at four corners and a turret at the fifth, in the map the fort appears as square in shape while the moat is five-sided. The fort is at present in such a bad state of repair that it is almost impossible to discover the purposes of the various towers and chambers found in it, but an idea can be obtained of the great skill and care that went into the making of the walls by an examination of the towers and wall on the west side of the fort. The moat is no longer filled by the sea due to its neglect, although after the expulsion of the Portuguese the fort continued to be used by the Persian garrison in Bahrain.

A further examination of the map reveals that in the time of the

level of the ground. Every 10-20 yards along the length of the channels are airholes, round chimneys lined with stone and varying in diameter from 2 to 5 feet. The top of the shaft, which resembles a well head, is surrounded by a low wall. Page 116 shows the channel which has been uncovered and in which the construction of the airholes can clearly be seen. At the shaft of the water channel which runs west of the village of Shakhura there is a large subterranean room which serves the purpose of a bathing hall. It has a high arched roof with columns branching out from a central pillar. It is roofed over and has a hard gypsum floor covered with fine white sand. There is a continual stream of cold water through the chamber, which is still used by the inhabitants from the surrounding villages as a bathing place to which they go in the heat of the summer and sit in comfort in the shady coolness below. It is rumoured that there are more such chambers, but this is the only one that the author has personally visited.

The channels in most cases carry water from springs in the hills a few miles inland to the coastal gardens. Many of them are still used, although others have long since fallen into ruin, but very skilful work was involved in their building and the fact that water still flows in many of them is a conclusive proof of their scientific construction. So far, no inscriptions have been found within them, but there is no doubt that if they were examined with care some signs would be found of their exact origin.

In these four sections most of the antiquities of the Bahrain Islands have been described, for they are unfortunately rare and, with the exception of the Tumuli, the mosques, the forts and the Qanats there, is little of archaeological interest in Bahrain. There are possibilities of future discoveries, however, especially in Bilad al-Qadim which should, as the ancient capital, yield something of interest to any archaeologist who explores its ruins. The numerous Arabic inscriptions would also be worth further study and their translation should add something to the history of Bahrain by giving the names of the various rulers who, at one time or another, built mosques or other buildings and had their good deed inscribed on stone.

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In addition to these works a number of books appear in the general bibliography at the end of this guide which may be consulted for further information about Bahrain's antiquities.

LITERACY

212 An effort was made to ascertain the number of literates.
162 In addition to people who were educated at Government and private schools those who had learned to read and write at Quran schools were counted as literate. The first Government school was opened in 1919 and during the last twenty years the number of schools for boys and girls has steadily increased. Persons registered as literate amounted to 14,057. If Europeans and Indians were deducted from this total there remain about 10,000 literates among the local population of 105,000, approximately 10% of the indigenous population being literate. This percentage, for Bahrain, is not low.

HOUSES

362 All occupied houses were numbered and counted; in some cases a "house" consisted of one small hut, in other cases it was a building occupied by thirty or forty members and hangers-on of one family. Empty houses, of which there were none in Manamah and few in Muharraq, were not included. The number of houses in Manamah was 5,703 and in Muharraq 3,720; in the first census the numbers were 4,051 and 3,155 respectively. In nine years 1,600 new houses have been built in Manamah and 500 in Muharraq. In both towns the proportion of stone houses has increased considerably. The figures for houses in the villages are less accurate, it was often difficult to determine where one dwelling, consisting of a group of huts in a compound, ended and the next dwelling began. The census showed 6,232 houses in the villages and islands as against 5,575 in 1941. Taking the whole population and the number of houses, the average number of persons occupying one house was 6½.

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DISTRIBUTION BY TOWNS AND VILLAGES

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Town or Village	Census 1941 (1360)	Percentage of population	Census 1950 (1369)	Percentage of population
Manamah, Muharraq and Hedd.	49,274	56%	65,225	61½%
Other towns and Villages	39,164	44%	40,579	38½%
Total	88,438		105,804	

CENSUS OF DWELLING HOUSES

Towns or Villages	Census 1941 (1360)	Census 1950 (1369)
Manamah	4,649	5,703
Muharraq	3,317	3,720
Hedd	719	619
Other towns and villages	5,697	6,232
Total	14,382	16,274

LITERACY

212 Census 1941 (1360) Not recorded.

162 Census 1950 (1369) 14,057 (literates)

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1162 proximately 26,000 residents, and Hedd, a
632 pearl fishing center, around 10,000. The population exceeded that of the 1941 census by almost 20,000: the increase was confined mainly to the towns of Manama and Mu-
[167] harraq, and was attributed in large part to immigration.

871 Since the organization of the first government school in 1919, education has made considerable progress, but expansion is handicapped by a shortage of trained teach-
658 ing personnel. In 1950, the Bahrain govern-
562 ment supported 13 primary schools for boys
872 —8 in the towns and 5 in the villages. Educational facilities were made available to girls in 1928, and at present 6 primary schools are in operation. Of the 5,770 pupils registered in government schools in 1950-51,
871 slightly over 1,700 were girls. A few private
658 schools are established in Manama, while Koranic schools are found in most towns and villages. The government also maintains a secondary school, a technical school and a school hostel for boys, and provides scholarships for qualified students for advanced study at the American University
212 of Beirut and in Great Britain. In the recent census, the literacy rate in the indigenous population was estimated at 10 per cent.

Vital Statistics

659 The registration of births and deaths is
361 not compulsory in Bahrain, and no data for
165 the calculation of vital statistics are obtain-
163 able. Local medical authorities agree that the mortality rates in infancy and early childhood are uniformly high. Observations made by the census enumerators in 1950 suggest that the infant mortality is particularly serious in the rural villages, in contrast with the towns, where living conditions have improved within recent years. The maternal mortality rates are correspondingly high.

161 The size of the population remained
165 practically stationary in the rural districts
163 in the 9-year interval between the first and the second census surveys. The rate of increase in areas outside the towns of Ma-

1.256(8)